

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 3, 5-9, 11, and 13-16 are pending in this case. Claims 1, 5, 9, and 13 are amended by the present amendment. The changes to Claims 1, 5, 9, and 13 are supported in the originally-filed specification at least at page 8, line 20, to page 9, line 10 and at page 12, line 16, to page 13, line 12, and, therefore, add no new matter.

In the outstanding Office Action, Claims 1, 3, 5, 6, 8-14, and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ma, et al. (U.S. Patent No. 7,102,967, herein “Ma”), and Claims 7 and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ma, further in view of Nobukuni, et al. (U.S. Pub. No. 2001/0053115, herein “Nobukuni”).

Applicant respectfully traverses the rejections under 35 U.S.C. § 103(a).

Amended Claim 1 is directed to a disk apparatus comprising:

a photodetection unit configured to divisionally detect light reflected by the disk as a plurality of photodetection signals; and

a tracking error signal generation unit configured to generate a tracking error signal on the basis of a phase difference between the plurality of photo-detection signals detected by the photodetection unit, wherein

the tracking error signal generation unit includes an equalization unit configured to equalize waveforms of the plurality of photodetection signals detected by the photodetection unit,

the equalization unit has first frequency-gain characteristics that obtain a maximum gain of not less than 15 dB at a frequency corresponding to a shortest pit or mark, and second frequency-gain characteristics in which a gain attenuates within a frequency band not less than the frequency corresponding to the shortest pit or mark, and

the equalization unit has third frequency-gain characteristics that obtain a gain of not more than -3 dB at a frequency three times the frequency corresponding to the shortest pit or mark.

The outstanding Office Action asserts, at pages 2 and 3, that Ma teaches every element of Claim 1. At page 3, the outstanding Office Action asserts “Ma discloses the language related to the gain being high at the shortest pit and then attenuating,” but does not cite any specific portion of Ma as doing so.

At the outset Applicant respectfully submits that Applicant’s assertion in the previous response that “Ma contains no discussion of the values of f1 and f2 or a basis for those values,” created an obligation for the outstanding Office Action to refer to a specific section of Ma rather than present a conclusory statement in order to respond to the substance of Applicant’s argument under MPEP § 707.07(f).

Ma does not teach or suggest any relationship between f1 or f2 and “a frequency corresponding to a shortest pit or mark,” as recited in Claim 1. In fact, at the Abstract, Ma states “[t]he tracking error detecting apparatus generates a tracking error signal which is **not dependent on the lengths of pits or marks** recorded on an optical disk.” Emphasis added.

Further, in a non-limiting illustration at Fig. 6 and discussion at page 10, line 19, to page 11, line 5, the disclosure of the claimed invention discusses the advantages of the claimed frequency-gain characteristics for the claimed high-density disks. In contrast, Ma, though it depicts frequency-gain characteristics for the equalizers, does not describe “**a maximum gain of not less than 15 dB at a frequency corresponding to a shortest pit or mark**,” as recited by Claim 1. The gain described in Ma is constant in a frequency band not less than a signal band between f1 and f2, as shown in Fig. 8. Also, while Claim 1 recites “**a gain of not more than -3 dB** at a frequency three times the frequency corresponding to the shortest pit or mark,” Ma does not teach or suggest a gain below 0.

Also, Applicant again respectfully submits that an assertion of optimization of range through routine experimentation, though not explicitly stated as such in the outstanding Office Action but implied by the rejection, is improper in this instance. According to MPEP

§ 2144.05, where a range of values is asserted as obvious based on routine experimentation for optimization, “[a] particular parameter must first be recognized as a result-effective variable.” As discussed above, Ma contains no discussion of the values of f1 and f2 or a basis for those values. Ma makes no suggestion that a relationship between frequencies f1 and f2 and a frequency corresponding to a shortest pit or mark is optimal in any respect, and, in fact, Ma stresses tracking error detection not depending on the lengths of pits or marks. Thus, Ma has not suggested a recognition that the frequencies f1 and f2 are “result effective” variables and cannot be properly combined with a range recited only in the claimed invention for a valid rejection under 35 U.S.C. § 103.

Because Ma does not teach or suggest at least above-discussed features of Claim 1 and those features cannot be asserted as an optimization of a result-effective variable in Ma, Applicant respectfully requests that the rejection of Claim 1 under 35 U.S.C. § 103(a) be withdrawn.

Claims 3 and 5-8 depend from Claim 1 and, therefore, patentably define over Ma for at least the same reasons as Claim 1. Further, Nobukuni, which is additionally cited against Claim 7, fails to cure the deficiencies of Ma with respect to Claim 1. Thus, Applicant respectfully requests that the rejections of Claims 3 and 5-8 under 35 U.S.C. § 103(a) be withdrawn.

Claim 9 is directed to an information processing method and, though differing in statutory class and scope from Claim 1, patentably defines over Ma for substantially the same reasons as Claim 1.

Thus, Applicant respectfully requests that the rejection of Claim 9 under 35 U.S.C. § 103(a) be withdrawn.

Claims 11 and 13-16 depend from Claim 9 and, therefore, patentably define over Ma for at least the same reasons as Claim 9. Further, Nobukuni, which is additionally cited

against Claim 15, fails to cure the deficiencies of Ma with regard to at least Claim 9. Thus, Applicant respectfully requests that the rejections of Claims 11 and 13-16 under 35 U.S.C. § 103(a) be withdrawn.

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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